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IN THE CLAIMS

Please replace the claims on file with the following claims:

1. (currently amended) A standalone environmental parameter measurement and reporting device for use in actively detecting, capturing, and reporting environmental conditions to which a plurality of articles are subjected, the device comprising:

a. an enclosure designed to emulate the physical configuration of the articles of interest during industrial processing, so as to allow the device to be embedded within the same environment as the articles;

b. a plurality of sensors for monitoring multiple environmental conditions at regular intervals, each sensor embedded within the enclosure and providing a sensor output based on a monitored environmental condition experienced;

c. a processor deriving at least one environmental parameter value from a plurality of sensor output measurements obtained from the plurality of sensors; and

d. a wireless radio transceiver for reporting said derived environmental parameter value to a remote wireless receiver.

2. (withdrawn) The device claimed in claim 1, wherein the housing further comprises at least one grommetted hole therein enabling sensor exposure to the monitored environment surrounding the device while providing sealing between the sensor and the housing.

3. (previously amended) The device claimed in claim 1, wherein the shape of the enclosure is designed so as to enable embedding of the device with the articles without disrupting or altering the industrial process under measurement, by replicating the articles in respect of at least one of shape, surface texture, surface physical properties, and mass distribution.

4. (currently amended) The device claimed in claim 1, wherein the enclosure comprises:

a. two enclosure portions encasing the plurality of sensors, the transceiver, and the power source; and

b. ~~threaded~~ retaining means providing sealed engagement between the two enclosure portions, enabling assembly and disassembly of the device.

5. (previously amended) The device claimed in claim 1, wherein at least one of strength, structural integrity, and rigidity is provided by a plurality of printed circuit boards which include at least one of the processor, the transceiver, and one of the sensors.

6. (previously amended) The device claimed in claim 1, wherein each sensor comprises one of: an impact sensor, a pH sensor, a temperature sensor, a light intensity sensor, a position sensor, an orientation sensor, a roll sensor, an acceleration sensor, and a conductivity sensor.

7. (previously amended) The device claimed in claim 6, wherein the impact sensor includes a piezo-electric acceleration sensor.

8. (previously amended) The device claimed in claim 7, further comprising: three single-axis bi-directional impact sensors orthogonally oriented with respect to each other and situated about the center of mass of the device.

9. (withdrawn) The device claimed in claim 1, wherein at least one sensor comprises a removable sensor connected to a corresponding sensor port interface associated the processor.

10. (withdrawn) The device claimed in claim 1, wherein derived parameter values comprise one of: an angular moment imparted to the device, and a dew point.

11. (withdrawn) The device claimed in claim 10, wherein monitoring angular moment imparted to the device, the device further comprises: a plurality of impact sensors situated away from the center of mass of the device.

12. (withdrawn) The device claimed in claim 1, wherein the transceiver further comprises: a single channel transceiver, transmitting on a selectable frequency band, enabling concurrent use of the device with other devices in a single monitoring area.

13. (withdrawn) The device claimed in claim 1, further comprising one of: hardware analog-to-digital sensor output converter, and a software analog-to-digital sensor output converter.

14. (withdrawn) The device claimed in claim 1, further comprising an auto-gain control circuit providing one of: auto-calibration and auto-ranging.

15. (withdrawn) The device claimed in claim 1, further comprising a power conversion circuit converting power source voltage to a plurality of voltage outputs, each voltage output being used to provide power to one of: a sensor, the processor, and the transceiver.

16. (withdrawn) The device claimed in claim 1, further comprising at least one light emitting diode indicating device status without affecting the monitored environment.

17. (withdrawn) The device claimed in claim 1, further comprising a photo device enabling remote activation of the device without affecting the monitored environment.

18. (withdrawn) The device claimed in claim 1, further comprising a sound emitter, emitting one of: human-audible sound and ultrasound, to aid in locating the device.

19. (withdrawn) The device claimed in claim 1, optionally comprising a temporary data storage enabling monitoring environmental conditions in applications in which the device is temporarily shielded preventing radio transmission.

20. (withdrawn) The device claimed in claim 1, further comprising one of wired and wireless self-testing mechanism.

21. (withdrawn) A receiving module, the receiving module comprising:

a. a multi-channel transceiver for receiving at least one environmental parameter value and transmitting at least one control command; and

b. communication port for relaying the at least one environmental parameter value.

22. (withdrawn) The receiving module claimed in claim 21, comprising one of: a fixed receiver and a mobile receiver.

23. (withdrawn) The receiving module claimed in claim 21, further comprising one of a: sensing device activate button, sensing device find button, and a marker set button.

24. (withdrawn) The receiving module claimed in claim 21, further comprising a light emitter for actuating a sensing device.

25. (withdrawn) The receiving module claimed in claim 21, further comprising a sound detection circuit used in locating an ultrasound emitting sensing device.

26. (withdrawn) A method of monitoring environmental conditions experienced by a plurality of articles during one of handing, processing, storage, and transport, a monitoring device being subjected to the same environmental conditions as said articles, the device comprising a housing designed to be embedded with said articles, the method comprising steps of:

a. obtaining a plurality of measurement values from a corresponding plurality of sensors; and

b. deriving at least one environmental parameter value from the plurality of measurement values obtained.

27. (withdrawn) The method claimed in claim 26, wherein obtaining the plurality of measurement values, the method further comprises a step of collecting sensor measurements continuously at a collection rate.

28. (withdrawn) The method claimed in claim 27, wherein the collection rate is between 5 and 10 KHz.

29. (withdrawn) The method claimed in claim 26, wherein deriving the at least one environmental parameter value, the method comprises performing calculations in one of: hardware and software.

30. (withdrawn) The method claimed in claim 26, wherein deriving the at least one environmental parameter value, the method comprises a step of performing peak detection on one of: successive measurement values and successive derived environmental parameter values.

31. (withdrawn) The method claimed in claim 30, wherein peak detection is performed at a rate between 32 and 40 Hz.

32. (withdrawn) The method claimed in claim 26, further comprising: subjecting stream of derived environmental parameter values to a peak detection step determining whether the derived environmental parameter value is above a threshold level.

33. (withdrawn) The method claimed in claim 32, further comprising a step of: performing one of auto-calibration and auto-ranging based on the result of the peak detection step.

34. (withdrawn) The method claimed in claim 26, further comprising a step of transmitting the at least one derived environmental parameter value.

35. (withdrawn) The method claimed in claim 34, wherein prior to transmitting the at least one derived environmental parameter value, the method further comprises a step of selecting a transmission frequency band.

36. (withdrawn) The method claimed in claim 35, wherein selecting the transmission frequency band, the method further comprises a step of receiving a command to select a transmission frequency band.

37. (withdrawn) The method claimed in claim 26, further comprising a subsequent step of: inserting a marker between one of: successive measurement values and successive derived environmental parameter values.

38. (withdrawn) The method claimed in claim 26, further comprising optional subsequent steps of: performing a measurement value profile comparison, and extracting a statistic value in respect of a selected group of derived environmental parameter values.

39. (withdrawn) The method claimed in claim 26, further comprising steps of:

a. receiving a request for status reporting;

b. providing a status report; and

c. transmitting the status report.

40. (new) A method of monitoring environmental conditions experienced by a plurality of articles during one of handling, processing, storage, and transport, a monitoring device being subjected to the same environmental conditions as said articles, the device having an enclosure designed to emulate the physical configuration of the articles so as to allow the device to be embedded within the same environment as the articles, the method comprising steps of:

a. at regular intervals, obtaining a plurality of measurement values from a corresponding plurality of sensors; and

b. deriving at least one environmental parameter value from the plurality of measurement values obtained.